

- Fig.* 6. E 5619, B. M. A ventral sac, slightly weathered. From a drawing by Mr. Hollick. ($\times 2$ diam.)
- Fig.* 7. 57421, B. M. A small portion of the weathered surface of a radial. From a drawing by Mr. Hollick. ($\times 10$ diam.)
- Fig.* 8. E 6002, B. M. A plate from the proximal region of the ventral sac, to show the folding of the edges. Drawn on stone by the author. ($\times 3$ diam.)
- Fig.* 9. Grindrod Collection, Oxford. The distal end of the ventral sac appearing between the branches of the anterior arm. Drawn on stone by the author. (Nat. size.)
- Fig.* 10 *a.* 57142, B. M. Three brachials seen from the side, showing the covering-plates open.
b. 57142, B. M. The ventral surface of three brachials, the covering-plates removed and the ventral groove exposed.
c. Grindrod Collection. The ventral surface of three brachials, the covering-plates *in situ* and closed.
 All from drawings by the author. ($\times 3$ diam.)
- Fig.* 11. 57060 and E 6002, B. M. A radial showing the articular facet, combined from the evidence of these two specimens. From a drawing by the author. ($\times 3$ diam.)
- Fig.* 12. E 6003, B. M. Portion of surface of a radial, showing shagreen ornament. From a drawing by Mr. Hollick. ($\times 10$ diam.)
- Fig.* 13. The articular surface of a stem-ossicle from the evidence of numerous specimens. From a drawing by the author. ($\times 3$ diam.)

Cyathocrinus vallatus, sp. n.

- Fig.* 14. 170, Mason College. A radial seen obliquely from above, to show articular facet; also showing ornament. From a drawing by Mr. Hollick. ($\times 2$ diam.)
- Fig.* 15. E 6006, B. M. A cup seen from the right side, showing post. B and *x* on the left; outline restored. From drawings by Mr. Hollick and the author. (Nat. size.)
- Fig.* 16. 170, Mason College. A cup; orientation uncertain. From a drawing by Mr. Hollick. (Nat. size.)
- Fig.* 17. The articular facet for the stem of the same specimen. From a drawing by Mr. Hollick.
- Fig.* 18. E 6005, B. M. A much weathered cup; orientation uncertain. From drawings by Mr. Hollick and the author. (Nat. size.)

XXXIII.—*On some Spiders from the Andaman Islands collected by E. W. Oates, Esq.* By Prof. T. THORELL.

OUR knowledge of the arachnological fauna of the Andaman Islands is as yet exceedingly limited; so far as I know M. Eugène Simon is the only author who has, in a recently-published paper *, enumerated and described any spiders

* "Études sur les Arachn. de l'Asie mérid. faisant partie des collections de l'Indian Museum (Calcutta).—II. Arachn. recueillis aux îles Andaman par M. R. D. Oldham," in Journ. of the Asiatic Soc. of Bengal, Ivii. part ii. no. 3 (1887).

from those islands*. Only two of M. Simon's species were known to arachnologists as inhabiting other parts of Southern Asia, especially Burma and the Malay Archipelago; the rest (five species) were all new to science. To the seven species mentioned by M. Simon I am now able to add fourteen more, captured in Table Island by Mr. Oates, and kindly placed by him in my hands for examination. Though only two of these spiders (*Epeira Oatesii* and *Salticus modestus*) appear to be new, a list of them may, I think, be of some interest, as it affords strong evidence of the conformity of the spider fauna of the Andamans with that of Burma on the one side and the Malay Archipelago on the other; the twelve already-known species belong, in fact, also to the fauna of Burma or to that of the Malay Archipelago, and are even common to these two regions, with the exception perhaps of *Argyropeira pusilla*, from Amboina, of *Sarotes impudicus*, which had hitherto been captured in Burma only, and of *Telamonia Peckhamii*, which had been found in the Nicobar Islands and Sumatra.

The twenty-one species of spiders now known to inhabit the Andamans belong to the following tribes:—Territelariæ (1 sp.), Retitelariæ (2 sp.), Orbitelariæ (10 sp.), Citigradæ (1 sp.), Laterigradæ (2 sp.), and Saltigradæ (5 sp.). Moreover the Tubitelariæ are, in Mr. Oates's collection, represented by a few young specimens belonging to the genera *Clubiona* and *Eutitthu*; but these specimens (and that of a *Lycosa*) are not sufficiently developed to be determined or described. Also among the Andaman spiders studied by M. Simon there were young representatives of several genera (*Homalattus*, *Oxyopes*, *Nephila*, [*Meta*=*Argyropeira*?], *Her-silia*, *Chiracanthium*) that are not included in our lists of the spiders of the islands.

The species contained in Mr. Oates's collection are as follows:—

Tribus RETITELARIE.

Fam. Pholcoidæ.

1. *Pholcus elongatus*, Vins.

1863. *Pholcus elongatus*, Vins., Aran. d. îles de la Réun., Maurice et Madag. p. 135, pl. iii. fig. 5.

Two adult specimens, a male and a female.

* These species are:—1. *Cytæa albolumbata*, sp. n.; 2. *Cyllobelus miniaceomicans*, sp. n.; 3. *Sphedanus marginatus*, sp. n.; 4. *Gasteracantha annamita*, Sim. (= *G. leucomelæna* (Dol.), Thor.); 5. *Cyclosa albi-sternis*, sp. n.; 6. *Tetragnatha gracilis* (Stol.); 7. *Salticus andamanicus*, sp. n.

Fam. Theridioidæ.

2. *Theridium rufipes*, Luc.

1842*. *Theridion rufipes*, Luc., Explor. de Algérie, Arachn., p. 263, pl. xvi. figs. 5-5 d.

One adult male.

Tribus ORBITELARIÆ.

Fam. Euetrioidæ.

3. *Argyropeira pusilla* (Thor.).

1878. *Meta pusilla*, Thor., Studi sui Ragni Maesi e Papuani, II. Ragni di Amboîza, &c., in Annali del Museo Civico di Storia Naturale di Genova, xiii. p. 97.

Of this species, which had formerly been found in Amboina only, Mr. Oates has captured an adult female in Table Island. The area occupied by the four middle eyes is in this specimen not perceptibly broader behind than in front; in other respects it appears to be exactly similar in form to the types of the species. The colour shows but a few slight differences. The tarsal joint of the (yellowish) palpi is blackish; the middle area of the back of the abdomen has behind, instead of three pairs of small silver-coloured spots, two longitudinal, nearly parallel, close-set, silver-coloured lines; the sides of the abdomen are blackish, with a long, somewhat oblique, and slightly sinuated silver-coloured band, united anteriorly with the silvery pattern of the back, and they show also a small spot of the same colour, situated more below, near the base. The vulva consists, as in the types, of a small, pale, almost semicircular fovea, surrounded in front and on the sides by a low, backward-curved callus, which is black on the sides and pale in the middle.

The length of the specimen is $3\frac{2}{3}$ millim.; length of cephalothorax $1\frac{3}{4}$, of abdomen $2\frac{1}{4}$ millim.; legs, I. $9\frac{2}{3}$, II. $7\frac{3}{4}$, III. 4, IV. nearly $6\frac{1}{4}$, pat. + tib. IV. nearly 2 millim.

4. *Epeira (Cyclosa) Oatesii*, sp. n.

Cephalothorace in femina fortiter, in mare viv constricto, aut fere toto pieo, aut fusco-testaceo et saltem in medio pieo; sterno plaga albicanti-flava occupato, qua interdum, saltem in mare, in lineam anticam et maculas 5 marginales est divisa; pedibus testaceis, plus minus distincte nigricanti-annulatis; abdome ante medium dorsi

* According to Simon.

tuberculis duobus parvis munito et postice in conum simplicem retro directum producto, superius cinerascenti-testaceo, dorso playa nigri-cante inaequali vel fere rhomboidi antice notato, pone medium vero area magna subtriangula nigricante occupato, quae fascia longitudinali pallida perfecta est et in lateribus flexuoso-dentata: hac pictura tamen sope obsoleta.—♂ ♀ ad. Long. ♂ circa 3 $\frac{2}{3}$, ♀ 4 $\frac{1}{2}$ —5 millim.

Femina.—*E. camclodi*, Thor.* valde affinis est haec species, sed minor, et paucis aliis notis distinguenda. *Cephalothorax* ad formam plane ut in ea specie est, inter partes cephalicam et thoracicam fortiter constricta; pars thoracica paullo altior est quam pars cephalica, fovea ordinaria centrali sat magna, vix quadrata sed antice rotundata, et fere in summo partis thoracicae (non in declivitate ejus antica) locata. *Oculorum* series antica modice sursum curvata est: linea recta laterales infra tangens medios fere in centro secat; series postica fortiter est recurva. *Oculi* medii postici cum lateralibus anticis seriem rectam formant, si desuperne inspicitur cephalothorax. Area oculorum mediorum paullo longior est quam latior antice, multo latior antice quam postice. *Oculi* medii antici spatio diametrum suam paene aequanti sejuncti sunt; medii postici, ut laterales bini, contingentes sunt inter se.

Mandibulae patellis anticis paullo crassiores, plus duplo et dimidio longiores quam latores, versus basin sat fortiter convexæ. *Pedes* breves: 1st paris cephalothorace modo circa 2 $\frac{3}{4}$, non triplo, longiores sunt; pedes 4th paris pedibus 2nd paris vix longiores. *Aculei* pauci et debilissimi: patellae anteriores aculeo ejusmodi saltem extus munitæ sunt, et tibiae plerèque aculeum unum alterumve (vel potius setam) ostendunt. *Abdomen* satis altum, circa dimidio longius quam latius; non parum ante medium, ad $\frac{1}{3}$ longitudinis fero, versus latera, dorsum ejus tubercula duo obtusa erecta parva sed evidentissima ostendit; postice in formam coni sat brevis retro productum est. Desuper visum abdomen subovatum est, antice anguste rotundatum, in lateribus, usque ad $\frac{2}{3}$ longitudinis fere, ample et satis aequaliter rotundatum, dein vero lateribus rectis sensim angustatum et postice subacuminatum. A latere visum antice oblique rotundato-truncatum est, dorso anterius, ante tubercula, convexo-proclivi, dein reecto vel paullo concavato, apice retro et paullo sursum directo; postice hoc modo visum valde oblique truncatum et sat altum est abdomen (altitudine hic latitudinem ejus saltem aequante); spatium inter mamillas et apicem abdominis spatium inter eas et petiolum circiter aequat. *Vulva* ex “corpore” circa triplo latiore quam longiore, utrinque convexo et nitidissimo, fusco constat, et ex “scapo” brevi pallido deorsum et retro curvato et directo, qui corpore illo circa triplo angustior est et vix vel parum pone id pertinet: hic seapus basi sat latus et sensim angustatus est, dein vero angustus, parte apicali

* Studi sui Ragni Malesi, II. Ragni di Amboina, &c., loc. cit. p. 78.

angusta parum longiore quam latiore, lateribus parallelis, apice rotundato.

Color.—*Cephalothorax* piecus, parte cephalica antice et plaga magna utrinque in parte thoracica fusco-testaceis: saepius vero fusco-testaceus vel testaceus est, modo in medio, praesertim in impressionibus cephalicis, infuseatus, piecus vel nigricans. *Sternum* nigro-marginatum plaga maxima subtriangula, utrinque ter incisa, albicanti-flava occupatur, quae interdum in medio inaequaliter infuscata est (an nonnumquam in maculas divulsa?). *Mandibulae* testacea vel fusco-testacea, apice nigricantes. *Maxillae* et *labium* testacea, basi obscuriora. *Pulpi* testacei, parte tarsali apice nigricante, parte tibiali interdum ad apieem paullo nigricanti-maculata quoque. *Pedes* testacei, plus minus evidenter nigro-subannulata: femora anteriora apice intus plagam vel maeulum nigram ostendunt, sequentia internodia apice plus minus anguste nigra sunt; tibiae anteriores praeterea maculam vel annulum abruptum nigrum versus medium, extus, habent. *Abdomen* cinereo-testaceum, supra maeula basali magna nigricante subrhomboidi vel inaequali notatum, quae interdum angulo suo postico usque inter tubercula duo dorsi pertinet et paullo pallido-maculata est, interdum brevior et postice inaequaliter truncata: postice dorsum area nigricante maxima fere triangula occupatur, quae paullo pone medium dorsi initium capiens usque ad apieem ejus pertinet, interdum antice eum plaga illa nigricante conjuncta; in lateribus flexuoso-dou-tata est haec area, secundum medium fascia inaequali pallida geminata. Latera abdominis pallida nigricanti-variata sunt; spatium inter apicem dorsi posticum et mamillas fascia longitudinali lata nigricante plus minus expressa occupatur. Venter ante rimam genitalem subfuscus vel nigricans est, pone eam aut albicanti-flavus et plus minus nigro-variatus vel reticulatus, aut niger et albicanti-flavo-maculatus; *mamilæ* nigrae in area nigricante vel fusca positæ sunt. In exemplis cephalothorace et pedibus clarioribus et plaga illa basal is et area postica interdum parum distinctæ sunt, et abdomen tunc superius satis æqualiter cinereo-testaceum est totum.

Mas.—*Cephalothorax* vix inter partes cephalicam et thoracieam constrictus, impressionibus cephalicis tamen fortibus et postice sulco transverso coniunctis; a latere visus ante declivitatem posticam parum convexus, pene reetus et paullo proclivis est, et inter partes cephalicam et thoracieam paullo impressus. Utrinque anterius multo fortius quam in femina sinuato-angustatus est, parte thoraciea in lateribus amplissime et fortiter rotundata, parte cephalica lateribus rectis anteriora versus non parum angustata, tuberculo oculorum mediorum anticorum valde prominente; frontis latitudo vix $\frac{1}{3}$ latitudinis partis thoracieæ superat. Fovea centralis subtransversa et profunda postice sulco sat profundo usque ad declivitatem posticam continuatur. Spatium inter oculos medios anticos eorum diametro evidenter minus est; spatia, quibus a laterilibus anticis separantur, hanc diametrum circiter æquant.

Palpi breves, clava femoribus anticis non parum latiore; pars patellaris pene aequa longa ac lata est, supra convexa et seta longa forti erecta nigra munita. Pars tibialis parte patellari vix longior est sed etiam basi ea paullo latior, a basi ad apicem prae-sertim in latere exteriore sensim dilatata, apice paullo oblique truncato parte patellari circa dimidio latiore, angulo apicis exteriore paullo producto. Pars tarsalis, intus vergens, basi extus procursu ordinario obtuso intus vel sursum curvato munita est; bulbus, sat complicatus, a fronte visus subter, ad apicem extus, dentem fortem nigrum foras directum ostendit et sub eo setam rectam nigram, eam quoque foras directam; fere e medio bulbi subter, magis extus, alia seta gracilior et longior foras et paullo anteriora versus directa bulboque appressa exit. *Pedes* magis aculeati quam in femina sunt; aculei minus debiles quoque. Praeter aculeos paucos in femoribus, patellis et tibiis anterioribus, ut et in pedibus posterioribus (prae-sertim in femoribus 4ⁱ paris, quae etiam subter ad basin seriem brevissimam aculeorum parvorum ostendunt), aculeos nonnullos paullo longiores et fortiores in pedibus anterioribus video. In pedibus 1ⁱ paris tibiae intus aculeis 1 . 1, metatarsi intus 1 aculeo muniti sunt; tibiae 2ⁱ paris (qui ut 1ⁱ paris cylindratæ et paullo foras curvatae sed non incrassatae sunt) intus 1 . 1 aculeos, subter extus seriem aculeorum majorum 4 (sive 1 . 1 . 1 . 1 aculeos) ostendunt, subter intus vero aculeos minores 1 . 1; præterea supra versus apicem 1 aculeum habent hæ tibiae. Metatarsi 2ⁱ paris aculeo gracili saltem extus instructi sunt. Coxæ omnes muticæ. *Abdomen* brevius ovatum est quam in femina, desuper visum postice citius in conum parvum retro directum productum, a latere visum supra fortius et magis æqualiter convexum, mamillis evidenter longius a petiolo quam ab apice abdominis postico remotis.

Color.—*Cephalothorax* totus piceus est, *sternum* fuscum, maculis 5 marginalibus et linea marginali antica flavis circumdatum. *Mandibulae*, *maxilla* et *labium* fusco-testacea. *Palpi* ejusdem coloris, clava ferrugineo-fusca. *Pedes* subtestacei, nigricanti-subannulati: femora saltem anteriora ad apicem sat late nigricantia sunt, internodia sequentia (prae-sertim tibiae 4ⁱ paris) apice nigricantia vel nigro-maculata, et tibiae metatarsique præterea annulo plus minus distincto vel macula hujus coloris versus medium notati. *Abdomen* pene totum cinereo- vel lurido-testaceum est: pictura distincta in dorso vix ulla (modo vestigia plague dorsi anticae et areæ ejus posticæ video): dorsum ejus punctis 4 majoribus nigricantibus trapezium formantibus anterius notatum est; venter ante rimam genitalem obscurior est, pone cam in formam rectanguli transversi albicanti-flavus, maxillis in area transversa obscura positis.

♀.—Lg. corp. 5; lg. cephaloth. 2, lat. ej. pene 1½, lat. front. pene 1; lg. abd. 3, lat. ej. 2½ millim. Ped. I. pene 5¼, II. 4½, III. 3, IV. 4½ millim. longi; pat.+tib. IV. paullo plus 1½ millim.

♂.—Lg. corp. 3⅔; lg. cephaloth. pene 1¾, lat. ej. paullo plus 1½,

lat. front. circa $\frac{1}{2}$; lg. abd. paullo plus $2\frac{1}{3}$, lat. ej. $1\frac{3}{4}$ millim. Ped. I. pæne $4\frac{1}{2}$, II. paullo plus $3\frac{1}{2}$, III. $2\frac{1}{2}$, IV. 4 millim. longi; pat. + tib. IV. pæne $1\frac{1}{2}$ millim.

Of this species Mr. Oates's collection contains a few females and a single male.

5. *Epeira (Cyclosa) insulana*, Costa.

1834. *Epeira insulana*, Costa, Cenni Zool. &c. p. 65.
 1841. *Epeira anseripes*, Walck., H. N. d. Ins. Apt. ii. p. 146.
 1842. *Epeira trituberculata*, Lue., Explor. de l'Algérie, Arachn. p. 248, pl. xv. fig. 4.
 1877. *Cyrtophora melanura*, Sim., "Études Arachn.: IX. Arachn. recueillis aux îles Philippines," in Ann. de la Soc. Ent. de France, 5^e sér. vii. p. 72, pl. iii. fig. 9.
 1878. *Epeira anseripes*, Thor., Studi &c., II. Ragni di Amboina, loc. cit. xiii. p. 81.

The collection contains many examples of this very variable species, among them some few males. The "scapus" of the vulva is wanting (broken) in almost all the adult females.

For synonymy of *Epeira insulana*, Costa, see also Thorell, "Spindlar från Nikobarerna och andra delar af Södra Asien &c.," in K. Svenska Vetenskaps-Akademiens Handlingar, xxiv. no. 2 (1891), p. 150 *.

6. *Epeira Théisii*, Walck.

1841. *Epeira Théisii* [Theis], Walck., H. N. d. Ins. Apt. ii. p. 53; Atlas, pl. xviii. fig. 4.

Only a very young female specimen.

7. *Epeira punctigera*, Dol.

1857. *Epeira punctigera*, Dol. Bijdr., t. de Kennis d. Arachn. v. d. Ind. Archipel, in Tijdschr. v. Nederlandsch Indië, xiii. (ser. 3, iii.), p. 420.

Two males, one adult, the other not fully developed.

The full-grown specimen is rather large (10 millim. long), with the whole cephalothorax of a rusty-brown colour, and the back of the abdomen greyish yellow, without any other pattern than a small whitish \wedge near the base and the ordinary four impressed brownish points. The belly is darker along the middle, with a broad transverse yellow band immediately behind the rima genitalis and two large yellow spots in front of the mamillæ.

* "*Epeira tuberculata*, Lue.," is here a *lapsus calami* for *E. trituberculata*, Lue.

8. *Argiope pulchella*, Thor.

1881. *Argiope pulchella*, Thor., Studi &c., III. Ragni dell' Austro-malesia &c., loc. cit. xviii. p. 74.

A single young female.

9. *Gasteracantha brevispina* (Dol.).

1857. *Plectana brevispina*, Dol., Bijdr. &c., loc. cit. p. 423.

This appears to be the most common spider of the island. Mr. Oates's collection contains hundreds of specimens, young and full-grown, and among these latter also a few males. The back of the abdomen is in the adult male of a brownish or dirty yellowish colour, with one or two more or less distinctly limited black spots on either side near the lateral angles, and sometimes also with two round paler spots somewhat before the middle, as in most females *. The dorsal tubercle of the female's cephalothorax is rather low and obtuse, sometimes quite truncated at the tip, where it is frequently furnished with two longitudinal, very fine and short furrows, but not cloven so as to form two tubercles.

Tribus LATERIGRADAÆ.

Fam. Heteropodoidæ.

10. *Heteropoda venatoria* (Linn.).

1758. *Aranea venatoria*, Linn., Syst. Nat. ed. 10, I. ii. p. 1035.

Three adult males. The legs of these specimens are distinctly annulated, or, rather, provided with black bands or spots above, especially on the thighs.

11. *Sarotes impudicus*, Thor.

Cephalothorace in fundo ferrugineo-fusco, parte cephalica anterius saturatius colorata, clypeo et genis piceis; mandibulis nigris, labio pane semicirculato, palpis subpiceis, parte tarsali nigricante; pedibus subferrugineis; femoribus paullo pallidioribus, metatarsis tarsisque piceis et late nigricanti-scopulatis; abdомine ovato, in fundo sordide testaceo vel subfuscо, pilis densis flaventibus tecto, pictura distincta carente; vulva ex area cornea fusca constante, quae postice late et profundissime incisa est, hac incisura parte molli albicante repleta.—♀ ad. Long. 18–25 millim.

* For a more detailed description of the male see Thor., Spindlar fr. Nikobarerna, &c., loc. cit. p. 59.

1887. *Sarotes impudicus*, Thor. [Viaggio di L. Fea in Birmania e regioni vicine, ii.], Primo Saggio sui Ragni Birmani, in Ann. del Museo Civ. di Storia Nat. di Genova, ser. 2^a, v. p. 241 (= ♂).

Femina.—*Cephalothorax* æque longus ac latus est, latitudine clypei $\frac{3}{5}$ latitudinis maximæ cephalothoracis æquanti, præterea ad formam ut in mare, vix altior quam in eo. Series *oculorum* postica desuper visa recta est, series antica vix vel parum deorsum est curvata. Spatia inter oculos medios anticos et posticos anticorum diametro evidenter paullo majora sunt, et paullo majora quam intervallum inter oculos binos laterales, hoc intervallo diametrum oculi lateralis antici paullo superanti. Spatia subæqualia inter oculos 4 anticos diametrum mediorum eorum æquant. Oculi 4 postici, quorum medii paullo longius a lateralibus quam inter se distant, spatiis triplam mediorum diametrum æquantibus separati sunt. Spatium inter marginem clypei et oculos laterales anticos eorum diametrum æquat, sed spatium inter hunc marginem et oculos medios anticos horum oculorum diametro evidenter minus videtur. Ceterum oculi et *sternum* ut in mare loc. cit. diximus sunt.

Mandibulae femoribus anticis non parum latiores, patellas 1ⁱ paris longitudine æquantes, plus sesqui sed non duplo longiores quam latiores, in dorso ad longitudinem sat fortiter convexæ, læves, nitidæ, pilis rarioribus conspersæ; sulcus unguicularis postice 5 (5° minutissimo), antice 2 dentibus armatus est. *Maxilla* vix in labium inclinatae eoque saltem duplo et dimidio longiores; *labium* pæne duplo latius quam longius, apicem rotundatum versus lateribus leviter rotundatis sat fortiter angustatum, pæne semicirculatum igitur. (In mare apicem late rotundato-truncatum versus minus fortiter angustatum est.) *Palpi* mediocre; pars patellaris circa dimidio longior est quam latior, pars tibialis duplo longior quam latior; pars tarsalis duas priores conjunctas longitudine æquat. *Pedes* paullo breviores quam in mare, 2ⁱ paris cephalothoracee circa 4 $\frac{1}{4}$ longiores; hi pedes pedibus 1ⁱ paris paullo plus tarso suo longiores sunt, pedes 1ⁱ paris pedes 4ⁱ paris paullo plus tarso suo longitudine superant quoque. Ut in mare seculati et aculeati sunt pedes. *Abdomen* ovatum, saltem ante partum antice æqualiter rotundatum. *Vulva* ex area cornea elevata utrinque convexa, postice lateribus rotundatis sensim paullo angustata, femora latitudine circiter æquanti, pieca constat, quæ postice late et profundissime incisa est, hac incisura circiter ad dimidium longitudinis areæ pertinenti et cuncte molli albicante repleta: ab apice antico subrotundato hujus partis albicantis sulci duo parvi anteriora versus ducti et appropinquantes in area vulvæ cornea conspiciuntur.

Color.—*Cephalothorax* in fundo ferrugineo-fuscus, parte cephalica anterius paullo obscuriore, clypeo cum genis nigro-piceo; in declivitate postica subtestaceus est, hac area pallidiore subtriangula utrinque linea nigricante limitata. Pube sat densa appressa flavente vestitus est cephalothorax, et anterius pilis sparsus, qui

in fronte et in elypto nigri sunt, praeterea ad maximam partem testacei. *Sternum* ferruginco-fuscum, pilis nigris conspersum. *Mandibulae* nigrae, tuberculo basali rufo-fuseo; pilis nigris sparsae sunt, sulco unguiculari rufo-ciliato. *Maxillae* et *labium* nigra, apice picea. *Palpi* picei, basi clariiores, parte tarsali nigra; ad maximam partem sordide olivaceo-nigricanti-pilosi et -pubescentes sunt. *Pedes*, metatarsis et tarsis exceptis, in fundo testaceo-fusei, cinereo-testaceo-pubescentes et -pilosi, tibiis paullo obscurioribus et densius pilosis, femoribus subter plus minus obsolete nigricanti-punctatis; metatarsi et tarsi picei sunt, scopolis olivaceo-nigris. Aculei pedum palporumque nigro-picei vel nigri. *Abdomen* in fundo totum cinereo- vel olivaceo-testaceum, pictura distincta nulla; pilis flaventibus undique vestitum est. *Mamillae* fusco-testaceae, inferiores subter fuscæ.

♀ ad.—Lg. corp. 25: lg. cephaloth. 10, lat. ej. 10, lat. front. 6; lg. abd. 16, lat. ej. $11\frac{1}{2}$ millim. Ped. I. $38\frac{1}{2}$, II. $42\frac{1}{2}$, III. 31, IV. $34\frac{1}{2}$ millim. longi; pat.+tib. II. 15, pat.+tib. IV. $11\frac{2}{3}$ millim.

The collection contains several examples, adult and young, of both sexes. The males are $15\frac{1}{2}$ - $18\frac{1}{2}$ millim. long, with the cephalothorax as long as broad, and as high as in the females; one of them has two yellowish spots on either side of the longitudinal yellowish band on the back of the abdomen at its base. Young specimens are almost totally of a yellowish or brownish-yellow colour.

Of this species only one specimen, a male, had hitherto been found; it was captured at Me-tan-jà, in Burma, by Mr. L. Fea.

Tribus *SALTICRADÆ.*

Fam. *Salticoidæ.*

12. *Salticus modestus*, sp. n.

Cephalothorace piceo, albo-pubescente, in lateribus late pallidiore; *abdomine* quoque piceo et albo-pubescente, ovato, non constricto; *pedibus* piceis, testaceo-lineatis vel apice plus minus late testaceis, *trochanteribus* 4ⁱ *paris* flavo-testaceis, *tibiis* 1ⁱ *paris* subter 6 *paribus* aculeorum longorum armatis, *metatarsis* hujus *paris* 2 *paribus* aculeorum eiusmodi, *pedibus* 2ⁱ *paris* subter aculeis debilibus, 2. 2. in *metatarsis* et saltæ 1. 1. 1 in *tibiis* munitis.—♀ jun. Long. saltæ $4\frac{1}{2}$ millim.

Femina jun.—*Cephalothorax* paullo plus duplo longior quam latior, paullo pone medium sat fortiter angustatus, parte cephalica, quæ parte thoracica non parum altior est, desuper visa lateribus pæne parallelis anteriora versus vix vel parum angustata, fronte leviter rotundata, pone oculos posticos (qui paullo ante medium cephalo-

thoracis locum tenent) ample rotundata; pars thoracica parte cephalica non parum brevior et angustior est, parum longior quam latior antice, lateribus modo levissime rotundatis posteriora versus non parum angustata, postice late truncata et tenuiter elevato-marginata. Transversim parum convexa, paene plana est pars cephalica; a latere visa supra modice proclivis et recta est (modo inter oculos anticos paullo magis proclivis), pone (apud) oculum posticum prærupte declivis, haec declivitate recta, ipso dorso partis cephalicæ fere quadruplo breviore et oculi postici diametrum duplam longitudine vix æquante; pars thoracica a latere visa usque ad marginem posticum sat fortiter declivis est, modo anterius paullo convexa, præterea recta. Quadrangulus *oculorum* postice paullo latior est quam antice, paullo latior antice quam longior. Oculi medii antici valde magni sunt, lateralibus anticis circa triplo majorcs, spatio parvo ab iis remoti et paene tota diametro sua pone eos positi. Oculi minuti 2^æ seriei evidenter longius a lateralibus anticis quam a posticis oculis distant. Oculi postici foras eminent, lateralibus anticis paullo minores; vix longius a margine cephalothoracis quam inter se distant. *Sternum* longum et angustum, apice postico rotundato; antice inter coxas 1ⁱ paris usque ad labium productum est et hic apice truncatum.

Mandibulae anteriora versus et paullo deorsum directæ, duplo longiores quam latiores, subcylindratae, apice late et oblique rotundato-truncatae, ad ipsam basin subgeniculatae, præterea sat leviter convexæ; unguis mandibula non parum brevior, oblique intus et retro directus. *Maxillae* paullo divericantes, longæ, labio circa dimidio longiores. *Labium* plus dimidio, paene duplo longius quam latius, apice rotundato. *Palpi* breves, deplanati. Pars patellaris paullo longior est quam latior, a basi ad apicem sensim paullo dilatata; pars tibialis ea saltem duplo latior est, a basi ad apicem sensim non parum dilatata, paullo longior quam latior apice; pars tarsalis parte tibiali etiam paullulo latior et non parum longior est, circa dimidio longior quam latior basi, a basi ad apicem subacuminatum lateribus leviter rotundatis sensim angustata, (dimidiato-) elliptico-triangula fere. Partes tibialis et tarsalis conjunctim laminam magnam formant, quæ mandibulam tegit. *Pedes* breves, gracieles, parcus pubescentes; pedes 3ⁱ paris paullo longiores quam 2ⁱ paris sunt visi (?). Tibiae 1ⁱ paris subter 6 paribus aculeorum appressorum longorum armatae sunt, metatarsi hujus paris 2 . 2 aculeis ejusmodi. In pedibus 2ⁱ paris tibiæ subter aculeos paucos debiles (saltem 1 . 1 . 1 magis extus) ostendunt, et metatarsi hujus paris ut videtur 2 . 2 aculeos parvos subter. Præterea vix aculeati sunt pedes. *Abdomen* ovatum, circa dimidio longius quam latius, æqualiter convexum, neque impressum nec constrictum. *Mamillæ* mediocres.

Color.—*Cephalothorax* supra nigro-piceus, in lateribus testaceo-piceus, pube appressa alba minus dense vestitus. *Sternum* subpiceum. *Mandibula* albo-pubescentes, in dorso piceæ, in lateribus clariores. *Maxilla* et *labium* sordide testacea, basi subpicea.

Palpi pieei, parte femorali sordide testacea. *Pedes* ad partem nigricantes vel subpieei, ad partem testacei: 1^i paris pieei sunt, femoribus fascia longitudinali subtestacea supra notatis, coxis, patellis et tibiis testaceis (saltem patellæ tamen linea pieea longitudinali utrinque notatis); metatarsi hujus paris fuliginei sunt, fascia longitudinali testacea supra, tarsi nigricanti-testacei. In pedibus 2^i paris coxae et femora ad maximam partem pieea sunt, sequentia internodia vero testacea, linea longitudinali pieea utrinque, per patellam et tibiam usque in metatarsum dueta. *Pedes* posteriores pieei, patellis basi oblique et metatarsi apice testaceis, tarsis testaceis totis, trochanteribus 4^i paris testaceis quoque. *Abdomen* nigro-pieeum, subter paullo pallidius, pilis appressis tenuibus albis sat dense vestitum. *Mamillæ* testaceo-pieeæ.

♀ jun.—Lg. corp. $4\frac{1}{2}$: lg. cephaloth. paene $2\frac{1}{2}$, lat. ej. 1: lg. abd. 2, lat. ej. paene $1\frac{1}{2}$ millim. Ped. I. circa $5\frac{1}{4}$, II. circa $3\frac{1}{2}$, III. 4, IV. fere $6\frac{3}{4}$ millim. longi; pat. + tib. IV. paene 2 millim.

One specimen only, a not fully developed female.

13. *Plexippus Paykullii* (Aud. in Sav.)

1827. *Attus Paykullii*, Aud. in Sav., Deser. de l'Égypte, 2^e éd. xx. p. 172, pl. vii. fig. 22.

A male and a female, both adult.

14. *Telamonia Peckhamii*, Thor.

1891. *Telamonia Peckhamii*, Thor., Spindl. fr. Nikobarerna &c., loc. cit. p. 125.

A single nearly adult female. This species had hitherto been met with only in the Nicobar Islands and in Sumatra.

XXXIV.—*An Earthworm from Ecuador* (*Rhimodrilus ecuadoriensis*). By W. BLAXLAND BENHAM, D.Sc. (London), Aldrichian Demonstrator in Comparative Anatomy in the University of Oxford.

[Plate X.]

ON November 23, 1889, I received, owing to the kind suggestion of my friend Prof. Jeffrey Bell, two small earthworms from Mr. Edward Whymper for the purpose of identification; and I wish to record my best thanks to that gentleman for allowing me not only to identify them but to retain them for purposes of further research.

The two worms, from their external characters, appeared

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